

REMARKS

Claims 1-27 are pending in this application. Claims 1-27 are rejected.

Responsive to the objection to the drawings, Applicants have added Figs. 9A-12 to show the method steps of claims 1, 2, 5-9, 15 18-22 and 27 as requested by the Examiner. As claims 1, 2, 5-9, 15 18-22 and 27 were in the present application as filed, and as information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter (MPEP 2163.06), Applicants respectfully submit that Figs. 9A-12 are supported by the original disclosure of the present application. Therefore, no new matter has been added. Applicants respectfully submit that the drawings are in allowable form.

Further, Applicants have amended the specification to reflect the addition of Figs. 9A-12, without adding new matter to the present application.

Responsive to the rejection of claims 1, 2, 5, 10-15, 18 and 23-27 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,892,038 (Fukutani), Applicants respectfully traverses this rejection, and submit that claims 1, 2, 5, 10-15, 18 and 23-27 are in condition for allowance.

Fukutani '038 discloses an image forming apparatus (Figs. 1-5D) where reference numeral 25 denotes a ferromagnetic magnetoresistance effect type sensor element (hereinafter, referred to as MR sensor) that detects a pattern in which a rotor of the fixing unit driving motor 16 has been uniformly magnetized and outputs the detected pattern to a waveform converter 26 as a sine waveform corresponding to a rotational speed of the rotor (column 4, lines 38-44). In S403, the conveying speed of fixing unit 11 is set to the process speed V_p which is a conveying speed of an image forming portion constituted of cartridges 3C, 3Y, 3M, and 3Bk, transferring rollers 7C, 7Y, 7M, and 7Bk, conveyor belt 8, and the like (column 5, lines 7-11). In step S407, controller 17

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judges whether or not recording medium 10 onto which the full-color toner image has been transferred is conveyed to reach recording medium detection sensor 14 and an output of the sensor is turned on, and sensor 14 is shown as being after transfer nip portion N1 (column 5, lines 49-53). In step S408, in response to the fact that the leading end of recording medium 10 is detected (i.e., in response to the leading end of recording medium 10 leaving nip N1), counter 20 starts to count output pulses of cartridge driving motor 15 (column 5, lines 54-57). In step S409, controller 17 sends a deceleration command to motor driver 19, reduces the number of rotation of fixing unit driving motor 16, and sets the conveying speed of fixing unit 11 to V_{pd} lower than process speed V_p (column 5, lines 58-62). V_{pd} can be set to an arbitrary value as long as V_{pd} is lower than the process speed V_p , or in one embodiment, as an example, V_{pd} is assumed to be a speed of 95% of V_p , that is, $V_{pd} = 0.95 V_p$ (column 5, lines 62-65). In step S410, controller 17 monitors whether or not the count started in step S408 has reached $C1d$, to thereby judge whether the trailing end of recording medium 10 has reached the predetermined position on the upstream side of transfer nip portion N1 in the conveying direction (column 5, line 64 through column 6, line 3). If the count has reached $C1d$, in step S411, an acceleration command is sent from controller 17 to motor driver 19, the number of rotations of the fixing unit driving motor 16 is increased, and the conveying speed of fixing unit 11 is set to the process speed V_{pu} higher than the process speed V_p (column 6, lines 3-9). V_{pu} can be set to an arbitrary value as long as V_{pu} is higher than the process speed V_p , or preferably, V_{pu} is set to the speed represented by the following expression (column 6, lines 9-18).

$$V_{pu} = (V_p \cdot T - V_{pd} \cdot T_d) / (T - T_d) \quad (\text{Expression 1})$$

By determining V_{pu} as described above, fixing unit driving motor 16 is controlled such that a mean value of the speed at which one recording medium is passed through the fixing unit becomes process speed V_p (column 6, lines 19-22). Thus, recording medium 10 is finally discharged from fixing unit 11 at the same timing as the case where an image is formed on recording medium 10 at process speed V_p without any change in speed (column 6, lines 22-26).

In contrast, claim 1 recites in part:

transporting a print medium using a print media transport assembly including a first nip, said print media transport assembly operable at a first transport speed; driving a rotatable member associated with a second nip using an electric motor at a second transport speed which is independent from said first transport speed; ...

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed or suggested by Fukutani '038, or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

In further contrast, claim 15 recites in part:

transporting the first print medium using a print media transport assembly at a first transport speed to a first nip;
transporting the first print medium to a second nip at a second transport speed associated with an electric motor, said second transport speed being independent from said first transport speed; ...

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed or suggested by Fukutani '038, or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

In further contrast, claim 27 recites in part:

transporting a print medium through a first nip at a first transport speed using a first rotatable member;
driving a second rotatable member associated with a second nip using an electric motor at a second transport speed which is independent from said first transport speed; ...

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed or suggested by Fukutani '038, or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Fukutani '038 discloses an image forming apparatus where the fixer is decelerated (to velocity V_{pd}) as the leading end of a recording medium has exited the last nip of the transferring rollers, and the fixer is accelerated (to velocity V_{pu}) as the trailing end of recording medium has exited the last nip of the transferring rollers. Both V_{pd} and V_{pu} are stated as being dependent on the conveying speed V_p of the image forming portion, i.e., $V_{pd} < V_p$ or $V_{pd} = 0.95 V_p$, and $V_{pu} > V_p$, or $V_{pu} = (V_p \cdot T - V_{pd} \cdot T_d) / (T - T_d)$. Fukutani '038 discloses a method of printing a recording medium sheet in an imaging forming apparatus whereas the method of the present invention is initiated from either an electronic signal over an interface cable or by an operator input menu of printer 10, either after printer manufacture and color registration, or after a field replacement of fuser 32 (see page 9, lines 29-31 of the present application). Fukutani '038 fails to disclose or suggest at least driving a rotatable member associated with a second nip using an electric motor at a second transport speed which is independent from the first transport speed, as claimed in independent claim 1. Further, Fukutani '038 fails to disclose or suggest at least transporting the first print medium to a second nip at a second transport speed associated with an electric motor, the second transport speed being independent from the first transport speed, as claimed in independent claim 15. Yet further, Fukutani '038 fails to disclose or suggest at least driving a second rotatable member associated with a second nip using an electric motor at a second transport speed which is independent from the first transport speed, as claimed in independent claim 27.

An advantage of the present invention is that the relative speed between the independently driven members can be determined without additional sensors. A further advantage is that the

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method of determining and setting the relative transport speed of the downstream driven member can occur during manufacture or upon replacement of the downstream driven member.

For all of the foregoing reasons, Applicants submit that claims 1, 15 and 27, and claims 2, 5, 10-14, 18 and 23-26 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 3, 6-9, 16 and 19-22 under 35 U.S.C. § 103(a) as being obvious by U.S. Patent No. 6,892,038 (Fukutani), Applicants respectfully traverse this rejection. Claims 3, 6-9, 16 and 19-22 are dependent upon independent claims 1 and 15. Claims 1 and 15 are distinguished from the prior art including Fukutani '038 as described above; therefore, any dependent claims, including claims 3, 6-9, 16 and 19-22, are distinguished from the prior art including Fukutani '038. For all of the foregoing reasons, Applicants submit that claims 1 and 15, and claims 3, 6-9, 16 and 19-22 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 4 and 17 under 35 U.S.C. § 103(a) as being obvious by U.S. Patent No. 6,892,038 (Fukutani) in view of U.S. Patent No. 5,570,633 (Schultz et al.), Applicants respectfully traverse this rejection. Claims 4 and 17 are dependent upon independent claims 1 and 15. Claims 1 and 15 are distinguished from the prior art including Fukutani '038 and Schultz et al. '633 as described above; therefore, any dependent claims, including claims 4 and 17, are distinguished from the prior art including Fukutani '038 and Schultz et al. '633. For all of the foregoing reasons, Applicants submit that claims 1 and 15, and claims 4 and 17 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

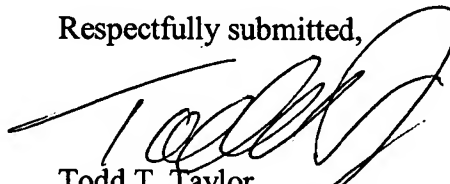
For the foregoing reasons, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are

therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: September 29, 2005.

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AMENDMENT(S) TO THE DRAWINGS

Please add Figs. 9A-12 as indicated by the attached Figs. 9A-12. Applicants submit that no new matter has been added.